

**PALM BEACH HARBOR MAINTENANCE DREDGING
PALM BEACH COUNTY
PERMIT NO. 0216012-001-JC
SEDIMENT QUALITY CONTROL / QUALITY ASSURANCE PLAN**

July 2006



APPROVED

Sediment Quality Control/Assurance Plan

Permit #: 0216012-007-JC

Approval: July 20, 2006

Bureau of Beaches and Coastal Systems

I. Introduction and Background

This submission by the U. S. Army Corps of Engineers (“the Corps”) is intended to serve as the detailed Sediment Quality Control/Quality Assurance Plan required by Rule 62B-41.008(1)(k)4.b., F.A.C. The plan addresses the sand currently present on the beach, as well as the material within the identified areas to be dredged within the authorized Federal Channel of Palm Beach Harbor.

A set of specifications on the sediments and other geotechnical information were provided during the application process for the permit and are generally available upon request. The permit was issued on March 17, 2005 for a ten year time period. Based on the sediment information provided, it was determined that all material from the entrance channels (Station 0+00 Cut 1 to Station 87+92 Cut 2) was suitable for nearshore and/or beach placement and that all material dredged from the turning basin (Station 87+92 Cut 2 to Station 19+50 Turning Basin) was only suitable for nearshore and/or ocean placement. The sediment quality specifications take into account the consistency of material within the proposed area to be dredged and represent values which may reasonably be attained given what is known about the dredge area material. The entrance channels and turning basin at Palm Beach Harbor are generally dredged at least once per year, providing continual confirmation on sediment characteristics. In addition to the sediment quality specifications, an overview of required project inspection and reporting is provided.

The goal of this plan is to assure that the sand placed on the beach complies with all applicable standards. Additionally, this plan enables the project to provide a beneficial use of dredged material by serving in an inlet-bypass capacity for sand that would have otherwise proceeded in the natural littoral drift of the coastal system adjacent to the inlet.

In addition to the specific quality control requirements contained herein, the Corps’ Quality Assurance Representative (QAR) or Area Engineer/Contracting Officer Representative (COR) and Contractor will periodically examine the beach during construction with the specific intent of assessing whether in fact the sand placed on the beach is acceptable. These observations would be conducted on a daily basis and reported in the daily turbidity reports, which are submitted on a weekly basis. Material to be placed in the nearshore (turning basin material) has already been analyzed and will be monitored daily through the turbidity monitoring protocol. During the pre-construction meeting, the COR will emphasize the importance of sound sand quality control management and the necessity to avoid problems in the execution of the measures in this plan.

II. DEP Sand Rule—Preconstruction Compliance

A. FDEP Sand Rule

Permits for this project require that only beach-compatible fill shall be placed on the beach. Standards of compatibility are defined by the Department of Environmental Protection "Rules and Procedures for Application for Coastal Construction Permits" Chapter 62B-41.007(2) j. These rules and procedures are otherwise known as the "Sand Rule" and can be found on page 5 of this plan and as of June 2006 on the DEP website:

<http://www.dep.state.fl.us/legal/Rules/beach/62b-41.pdf>

The Corps recognizes these rules and procedures as a standard of acceptance by which the fill material from dredge areas should be assessed.

B. Existing Beach Sands

In general, nearshore placement of material has benefited the existing beach placement area by routinely receiving dredged material from the entrance channel of Palm Beach (material coming from the beaches located north of the inlet create shoal conditions in the channel). The template fill placed within the construction boundaries should be consistent in character with the existing beach, as has historically been the case and historical observations provide confirmation of the process. In order to verify the character of sand within the placement area, the contractor and Corps of Engineers (COE) personnel shall continually observe the placement activities to ensure that the dredged material is acceptable for beach placement. These observations would be conducted on a daily basis and reported in the daily turbidity reports, which are submitted on a weekly basis. Material to be placed in the nearshore (turning basin material) has already been analyzed and will be monitored daily through the turbidity monitoring protocol.

C. Maintenance Dredging Material

Clusters of historical core boring logs and grab samples from the area (collected for previous dredging events) indicate that the source materials from the entrance channels and turning basin have shown consistent sediment characteristics and range between fine sands(turning basin) to coarse sands (entrance channels), with some shell. When appropriate in the future when the quality of material may be questioned the material would be analyzed so that a sieve data sheet would be included when performing and reporting sieve analyses. This would include the following in tabular form: 1) sieve number, 2) diameter in mm, 3) diameter in phi units, 4) weight retained on sieve, 5) weight percent retained on sieve, 6) cumulative weight retained on sieve, 7) cumulative weight percent retained on sieve. All weights and percentages would be recorded to the nearest 0.01 gm. See additional information below:

- 1. Sampling Methodology** - Grab samples would be collected by the Corps using a standard ponar (or other suitable device) within the project's prospective

dredging areas. At a minimum, sampling locations would be located at approximately 1000 foot intervals.

2. Laboratory Analyses - Each sample would be characterized as to sand-type, moist color (Munsell), grain size distribution (sand grain frequency, median grain size, mean grain size, sorting coefficient), % shell, % fines (retained on #230 sieve), % fine gravel (retained on the #4 sieve), % coarse gravel, cobbles or material (retained on the 3/4 inch sieve). Sample granularmetrics would be quantified by performing a gradation analysis using nested sieves based upon ASTM D 422. Required U.S. Standard sieve sizes shall include 3/4", 3/8", 4, 7, 10, 14, 18, 25, 35, 45, 60, 80, 120, 170, 200, and 230.

3. Recording and Reporting of Results - The results of each sample analysis would be submitted as follows: (a) a tabular summary of % shell, % fines, % fine gravel, % coarse gravel, % cobbles or other material (retained on the 3/4 inch sieve), Munsell color (moist sample), and presence of construction debris or other foreign matter; (b) grain-size cumulative frequency distribution curve (a.k.a. gradation curve), and (c) tabular summary of nested sieve sample granularmetrics including mean grain size, median grain size, and sorting expressed as a numeric and verbal value. The sample submittal date to the laboratory would be recorded by the laboratory on all reporting documents.

D. Outcome and Action - If an examination by the Corps of the pre-construction sediment analytical data or historical geotechnical data reveals the likelihood of non-compliant material being placed on the beach or nearshore area, other disposal or beach remediation alternatives may be pursued by the Corps in consultation with DEP. These options would include ocean placement, nearshore placement, and in-channel placement.

III. DEP Sand Rule—Compliance During Construction

A. Environmental Protection Plan - The Contractor's *Environmental Protection Plan (EPP)* shall be submitted for review and acceptance by the USACE as required currently under Section 01355 (Environmental Protection) specification of the project. At the direction of the COR, this EPP may also address sediment quality assurance by including the training received by contractor designees to visually recognize placement materials not in compliance with the sand rule. A "short-course" on identification of beach quality sand may be offered by the Corps or a Corps designee to the Contractor to enable compliance with the sand rule.

B. Observations - In order to verify the character of sand within the placement area, the contractor and Corps of Engineers (COE) personnel shall continually observe the placement activities to ensure that the dredged material is acceptable for beach placement. These observations would be conducted on a daily basis and reported in the daily turbidity reports, which are submitted on a weekly basis. Material to be placed in the nearshore (turning basin material) has already been analyzed and will be monitored daily through the turbidity monitoring protocol.

C. Outcome and Action - If an observation by the Contractor or Corps representative reveals potentially non-compliant material being placed on the beach (i.e., significant visual difference between the sand indicated in the contract plans and specifications and the material being placed on the beach--including shell or other debris), the Contractor shall immediately notify the COR. Such observations of potential non-compliance shall also be recorded in the Daily Report of Operations (ENG Form No. 27A or ENG Form No.4267). The COR will respond as described in the project specifications, currently under sections 02325 (Dredging) and 01355 (Environmental Protection). Alternative techniques required for the removal of non-compliant material may also require a separate contracting action by the Corps. Sampling of potentially non-compliant material would be conducted as outlined above under “II C. Maintenance Dredging Material”. Material could also be considered non-compliant based on unacceptable silt content, which would be evident in the color of the material.

D. Dredge Position Monitoring (Dredge Location Control) – To ensure that the material being dredged is taking place within the channel limits and to protect environment resources outside of and adjacent to the channel, dredge position monitoring shall be required. The pertinent criteria for this requirement shall be addressed in the contract specifications under the section titled “Dredging”; refer to the sample criteria below.

IV. FDEP Sand Rule - Post-Construction Compliance

A. Methodology - Within 60 days of project completion, sand rule compliance observations shall be conducted by the Corps within the area that material was placed during the dredge event, the material will be sampled and analyzed regardless of sediment quality in accordance with the following:

B. The samples of fill shall be collected from representative locations within the placement area at approximately 1000’ intervals (sample locations will be recorded in field notes) and will utilize the same sampling techniques outlined above under “II C. Maintenance Dredging Material”. The material would be analyzed so that a sieve data sheet would be included when performing and reporting sieve analyses. This would include the following in tabular form: 1) sieve number, 2) diameter in mm, 3) diameter in phi units, 4) weight retained on sieve, 5) weight percent retained on sieve, 6) cumulative weight retained on sieve, 7) cumulative weight percent retained on sieve. All weights and percentages would be recorded to the nearest 0.01 gm. See additional information below:

C. Laboratory Analyses - Each sample will be characterized as to sand-type, moist color (Munsell), grain size distribution (sand grain frequency, median grain size, mean grain size, sorting coefficient), % shell, % fines (retained on #230 sieve), % fine gravel (retained on the #4 sieve), % coarse gravel, cobbles or material (retained on the 3/4 inch sieve). Sample granulometrics shall be quantified by performing a gradation analysis using nested sieves based upon ASTM D 422. Required U.S. Standard sieve sizes shall include 3/4”, 3/8”, 4, 7, 10, 14, 18, 25, 35, 45, 60, 80, 120, 170, 200, and 230.

D. Recording and Reporting Results - The results of each sample analysis shall be submitted as follows: (a) a tabular summary of % shell, % fines, % fine gravel, % coarse gravel, % cobbles or other material (retained on the 3/4 inch sieve), Munsell color (moist sample), and presence of construction debris or other foreign matter; (b) grain-size cumulative frequency distribution curve (a.k.a. gradation curve), and (c) tabular summary of nested sieve sample granularmetrics including mean grain size, median grain size, and sorting expressed as a numeric and verbal value. The sample submittal date to the laboratory shall be recorded by the laboratory on all reporting documents.

F. Outcome and Action – The information generated by the Corps from the examination of the post-construction sediment analytical data shall be submitted to DEP as verification of compliance with the Sand Rule within a reasonable period of time after collection.



FDEP “Sand Rule”

F.A.C. 62B-41.007

Design, Siting and Other Requirements.

(j) To protect the environmental functions of Florida’s beaches, only beach compatible fill shall be placed on the beach or in any associated dune system. Beach compatible fill is material that maintains the general character and functionality of the material occurring on the beach and in the adjacent dune and coastal system. Such material shall be predominately of carbonate, quartz or similar material with a particle size distribution ranging between 0.062mm (4.0Φ) and 4.76mm (-2.25Φ) (classified as sand by either the Unified Soils or the Wentworth classification), shall be similar in color and grain size distribution (sand grain frequency, mean and median grain size and sorting coefficient) to the material in the existing coastal system at the disposal site and shall not contain:

1. Greater than 5 percent, by weight, silt, clay or colloids passing the #230 sieve (4.0Φ);
2. Greater than 5 percent, by weight, fine gravel retained on the #4 sieve (-2.25Φ);
3. Coarse gravel, cobbles or material retained on the 3/4 inch sieve in a percentage or size greater than found on the native beach;
4. Construction debris, toxic material or other foreign matter; and
5. Not result in cementation of the beach.

If rocks or other non-specified materials appear on the surface of the filled beach in excess of 50% of background in any 10,000 square foot area, then surface rock should be removed from those areas. These areas shall also be tested for subsurface rock percentage and remediated as required. If the natural beach exceeds any of the limiting parameters listed above, then the fill material shall not exceed the naturally occurring level for that parameter.

(k) Pursuant to subsection 62B-41.005(15), F.A.C., sandy sediment derived from the maintenance of coastal navigation channels shall be deemed suitable for beach placement with up to 10% fine material passing the #230 sieve, provided that it meets the criteria contained in (j)2. through 5. above and water quality standards. If this material contains between 10% and 20% fine material passing the #230 sieve by weight, and it meets all other sediment and water quality standards, it shall be considered suitable for placement in the nearshore portion of the beach.

SAMPLE CRITERIA FOR DREDGE POSITION MONITORING

Dredge Location Control

The Contractor is required to have electronic positioning equipment that will locate the dredge when operating on the project. This equipment shall include real-time measurement of the water (tide) level. The Contractor is required to calibrate the equipment as required by the manufacturer or as required by the Contracting Officer. Proof of calibration shall be submitted to the Contracting Officer. Continuous locations of the dredge shall be made at all times during dredging, unloading, and transporting operations. The reason the dredge is outside the borrow area limits shall be annotated on the position chart and on the Contractor's Quality Control Report for each occurrence. The location of the dredge is to be by computed coordinates with a probable range error not to exceed 10 feet and furnished daily as part of the dredge reports, along with a real-time drawing of the track of the dredge in relation to the borrow area. Data collected while the dredge is in the vicinity of the borrow area, and at the pumpout location shall be plotted in chart form in 200-foot intervals with date and time. The charts shall show the track and draft of the dredge approaching, traversing, and leaving the work areas in question. Plotted charts shall be organized and maintained at a central work location for inspection on a daily basis by the Contracting Officer. Plotted charts shall be organized as directed, bound, and submitted weekly to the Contracting Officer for permanent file record. The Contractor's method of location of the dredge shall be submitted for review. LORAN-C shall not be permitted for location control. The Contractor is also required to have a depth of dredging indicator for each dragarm or cutterhead accurate to within one foot. The instrument used shall indicate the depth of dredging at all times and draghead depth when the dredge is outside the borrow area limits within 1-foot accuracy. For hopper dredges, the instrument may be a graph type paper or electronic recorder or an indicator which uses a pointer and scale. The reported elevation of dragarm and/or dredging shall be adjusted by the measured water level elevation and shall be reported relative to the datum indicated on the drawings and shall have a probable range error not to exceed 0.5 feet vertical. The paper or depth record produced by this instrument shall be submitted daily with the daily dredge report. The reason the dredge is outside the borrow area limits shall be annotated on the depth record and the draghead depth shall be highlighted. Flagging or marking the winch cables are not an acceptable option to fulfill this instrument requirement. The indicators shall be in plain view of drag tenders, quality control and Government inspectors.



Department of Environmental Protection

Jeb Bush
Governor

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Colleen M. Castille
Secretary

JOINT COASTAL PERMIT

PERMITTEE/AUTHORIZED ENTITY:

U.S. Army Corps of Engineers
c/o Mr. Richard E. Bonner, P.E.
Jacksonville District
Post Office Box 4970
Jacksonville, Florida 32232-0019

Permit/Authorization No.: 0216012-001-JC

Date of Issue: March 17, 2005

Expiration Date of Construction Phase:
March 17, 2015

County: Palm Beach

Project: Palm Beach Harbor Maintenance
Dredging

This permit is issued under the authority of Chapter 161 and Part IV of Chapter 373, Florida Statutes (F.S.), and Title 62 and 40, Florida Administrative Code (F.A.C.). Pursuant to Operating Agreements executed between the Department of Environmental Protection (Department) and the water management districts, as referenced in Chapter 62-113, F.A.C., the Department is responsible for reviewing and taking final agency action on this activity.

ACTIVITY DESCRIPTION:

The project is to expand the settling basin and maintenance dredge the entire navigation-related complex at Palm Beach Harbor/Lake Worth Inlet to the following specifications:

Location	Depth + Overdredge (below MLW)	USACE Boundaries* (Approximate)
Settling Basin (Southern)	35 feet + 2 feet	Rge (000 to -825), Stn (32.0 to 37.5)
Settling Basin (Northern)	29 feet + 1 foot	Rge (-825 to -975), Stn (32.0 to 37.5)
Entrance Channel (Outer)	35 feet + 2 feet	Rge (000 to 400), Stn (25.0 to 30.0)
Entrance Channel (Main)	37 feet + 2 feet	Rge (000 to 400), Stn (30.0 to 56.0)
Inner Channel	33 feet + 2 feet	Rge (000 to 400), Stn (56.0 to 86.0)
Turning Basin (Main)	33 feet + 2 feet	Rge (000 to 1600), PI Stn (-1.4 to 17.2)
Turning Basin (Northern)	25 feet + 1 foot	Rge (-500 to 080), PI Stn (10.1 to 19.6)

* Reference indicated on USACE plans. Rge interval = one foot, Stn interval = 100 feet.

Dredged material will be placed within the nearshore disposal template, landward of the -17-foot mean low water (MLW) contour and seaward of the MLW line, to elevations at or below 0.0 MLW. Placement of material will begin immediately south of the south jetty, and proceed in a southerly direction. An hydraulic (suction) dredge will be used for all dredging

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conducted under this permit. **This permit, unless subsequently modified, is for one dredging event only.**

USACE STANDARD PRACTICES:

The USACE commits to incorporating the following details as part of their customary actions:

1. Plan drawings and surveys will show all biological resources and work spaces (e.g., anchoring area, pipeline corridors, staging areas, boat access corridors, etc.) to be use for this project.
2. As built surveys will clearly depict both the original design and constructed elevation.
3. The statement of completion will specify volume dredged and volume placed for each work area (e.g., Turning Basin, Channel, Existing Settling Basin, etc.)

ACTIVITY LOCATION:

Dredging activity is located at or adjacent Lake Worth Inlet, within Sections 34 and 35 Township 42 South, Range 43 East. The nearshore disposal template and the first beach fill template are located immediately south of the jetty, between DEP reference monuments R-76 and R-79, Sections 2 and 3, Township 43 South, Range 43 East. The Mid-Town beach fill template is located between R-90.4 and R-101.4. The Mid-Town Borrow Area lies within Sections 1 and 12, Township 43 South, Range 43 East. All activities are within Palm Beach County, Lake Worth Lagoon (Atlantic Intracoastal Waterway) or the Atlantic Ocean, Class III Waters, **not** Outstanding Florida Waters.

The Department acknowledges that dredging of the existing turning basin, channel and settling basin, excavation to expand the settling basin, and disposal of the dredged material falls within one of the federal powers listed in the Submerged Lands Act under 43 USC 1311(d) or 43 USC 1314, and, under those provisions, needs no authorization from the Board of Trustees to utilize sovereignty submerged lands. However, under the provisions of the Coastal Zone Management Act (16 USC 1451-1465), this activity requires Florida's concurrence with a determination of consistency with the sovereignty submerged lands provisions of Florida's approved Coastal Management program prior to federal approval of the proposed activity. The State has determined that the proposed activity is consistent with the sovereignty submerged lands provisions of Florida's approved Coastal Management program.

This permit constitutes a finding of consistency with Florida's Coastal Zone Management Program, as required by Section 307 of the Coastal Zone Management Act. This permit also constitutes certification of compliance with state water quality standards pursuant to Section 401 of the Clean Water Act, 33 U.S.C. 1341. In addition, the Department has determined, pursuant to Section 380.0651(3)(e), F.S., that the facility is located so that it will not contribute to boat traffic in a manner that will adversely impact the manatee.

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The above named permittee is hereby authorized to construct, through its contractors, the work shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof. **This permit is subject to the limits, conditions, and locations of work shown in the attached drawings, and is also subject to the General Conditions and Specific Conditions, which are a binding part of this.** You are advised to read and understand these drawings and conditions prior to commencing the authorized activities, and to ensure the work is conducted in conformance with all the terms, conditions, and drawings. If you are utilizing a contractor, the contractor also should read and understand these drawings and conditions prior to commencing the authorized activities.

GENERAL CONDITIONS:

1. All activities approved shall be implemented as set forth in the drawings incorporated by reference and in compliance with the conditions and requirements of this document. The Corps shall notify the Department in writing of any anticipated significant deviation from this authorization prior to implementation so that the Department can determine whether a modification is required. If the Department determines that a deviation is significant, then the Corps or the local sponsor, as appropriate, shall apply for and obtain the modification prior to its implementation.
2. If, for any reason, the Corps does not comply with any condition or limitation specified herein, the Corps shall immediately provide the Department with a written report containing the following information: a description of and cause of noncompliance; and the period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. Compliance with the provisions of this condition shall not preclude the Department from taking any enforcement action allowed under state law to the extent that federal sovereign immunity has been waived under 33 U.S.C. 1323 and 1344(t).
3. The Corps shall obtain any applicable licenses or permits which may be required by federal, state, local or special district laws and regulations. Nothing herein constitutes a waiver or approval of other Department permits or authorizations that may be required for other aspects of the total project. Projects shall not proceed until any other required permits or authorizations have been issued by the responsible agency.
4. Nothing herein conveys title to land or water, constitutes State recognition or acknowledgment of title, or constitutes authority for the use of sovereign land of Florida seaward of the mean high-water line, or, if established, the erosion control line, unless herein provided, and the necessary title, lease, easement, or other form of consent authorizing the proposed use has been obtained from the State.

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5. Any delineation of the extent of a wetland or other surface water submitted as part of the application, including plans or other supporting documentation, shall not be considered specifically approved unless a specific condition of this authorization or a formal determination under section 373.421(2), F.S., provides otherwise.
6. Nothing herein conveys to the Corps or creates in the Corps any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the Corps or local sponsor, or convey any vested rights or any exclusive privileges.
7. This document or a copy thereof, complete with all conditions, attachments, modifications, and time extensions shall be kept at the work site on the authorized activity. The Corps shall require the contractor to review this document prior to commencement of the authorized activity.
8. The Corps specifically agrees to allow Department personnel with proper identification, at reasonable times and in compliance with Corps specified safety standards access to the premises where the authorized activity is located or conducted for the purpose of ascertaining compliance with the terms of this document and with the rules of the Department and to have access to and copy any records that must be kept; to inspect the facility, equipment, practices, or operations regulated or required; and to sample or monitor any substances or parameters at any location reasonably necessary to assure compliance. Reasonable time may depend on the nature of the concern being investigated.
9. At least forty-eight (48) hours prior to the commencement of authorized activity, the Corps shall submit to the Department a written notice of commencement of activities indicating the anticipated start date and the anticipated completion date.
10. If historic or archaeological artifacts are discovered at any time on the project site, the Corps shall immediately notify the State Historic Preservation Officer, and if a significant deviation is necessary, shall also notify the Department.
11. Within a reasonable time after completion of project construction or a periodic maintenance dredging event, the Corps shall submit to the Department a written statement of completion. This statement shall notify the Department that the work has been completed as authorized and shall include a description of the actual work completed. The Department shall be provided, if requested, a copy of any as-built drawings required of the contractor or survey performed by the Corps.

SPECIFIC CONDITIONS:

1. The Department has issued this permit based on adherence by the USACE and its contractors to resource protection measures that maintain the intent of, and are substantially similar to, provisions contained in the draft plans and specifications reviewed and approved by the Department. Accordingly, the draft plans and specifications currently contain the following sections:
 - a. Protection of Fish and Wildlife Resources
 - i. Endangered Species Protection
 - ii. Endangered Species Observers (Hopper Dredge Only)
 - iii. Manatee, Sea Turtle, and Whale Sighting Reports
 - iv. Disposition of Turtles or Turtle Parts
 - v. Report Submission
 - vi. Hopper Dredge Equipment
 - vii. Recording Charts for Hopper Dredge(s)
 - viii. Sea Turtle Risk Assessment (For Hopper Dredges Only)
 - ix. Sea Turtle Beach Nest Monitoring
 - x. Beach Placement Restrictions
 - xi. Hardground/Reef Protection
 - b. Seagrass Protection Measures

If there is any significant change in any of these provisions, the USACE will notify the Department pursuant to General Condition #1. While the federal government is in some cases entitled to the privilege of sovereign immunity, the state reserves the right to proceed in any legal action against the USACE or its contractors that it deems appropriate.

2. All reports or notices relating to this permit shall be sent to the DEP, Bureau of Beaches and Coastal Systems, JCP Compliance Officer, 3900 Commonwealth Boulevard, Mail Station 300, Tallahassee, Florida 32399-3000 and the DEP Southeast District Office, 400 N. Congress avenue, Suite 200, West Palm Beach, FL, 33401. When submitting any information to the Bureau, please include a transmittal cover letter clearly labeled with the following at the top of each page: "This information is submitted in accordance with Item No. [XX] of Permit No. 0216012-001-JC, Palm Beach Harbor Maintenance Dredging."
3. At least 7 days prior to commencement of the initial dredging event authorized by this permit, and at least 14 days prior to each subsequent event, the permittee shall conduct a pre-construction conference to review the specific conditions and monitoring requirements of this permit with permittee's contractors, the engineer of record, and Department staff representatives. The permittee shall provide written notification, at least 7 days in advance of the meeting for the initial dredging event, and at least 14 days in

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advance of the meeting for subsequent events, to the following offices advising of the date, time, and location of the pre-construction conference:

DEP, Bureau of Beaches & Coastal Systems
Attn: JCP Compliance Officer
Mail Station 300
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000
Phone: (850) 487-4471
Fax: (850) 488-5257

DEP, Southeast District Office
Submerged Lands & Environmental
Resources Program
400 N. Congress Avenue, Suite 200
West Palm Beach, FL 33401
Phone: (561) 681-6600

FWC, Imperiled Species Management Section
620 South Meridian Street
Tallahassee, Florida 32399-1600
Phone: (850) 922-4330
Fax: (850) 921-4369

Town of Palm Beach
Attn: Coastal Projects Administrator
951 Old Okeechobee Rd
West Palm Beach, FL 33401
Phone: (561) 838-5440
Fax: (561) 835-4691

4. At least 14 days prior to construction for the initial dredging event, and at least 28 days prior to each subsequent dredging event, the permittee shall submit the following for review by the Department two (2) hard copies and an electronic copy of detailed ***final construction plans and specifications*** for all authorized activities, including a vessels operations plan. Any significant changes made to these documents during construction, as necessitated by field conditions, will be dealt with pursuant to General Condition #1.
5. At least 48 hours prior to commencement of work authorized by this permit, the permittee shall provide written notification of the date of the commencement and proposed schedule of construction.
6. The permittee and the Department, within their respective authorities and funding, shall ensure that beach compatible dredged material is placed on Florida's beaches to the extent economically feasible, consistent with Florida's beach management plan adopted pursuant to Chapter 161, F.S. and other beneficial uses criteria as may be specified by the Department and applicable federal standards. To further the parties' goals for sediment management, prior to each dredging event the Corps shall provide the Department with existing geotechnical information characterizing the sediments to be dredged and alternative disposal options with projected costs to allow the Department to participate in funding alternative disposal options over the least costly method.
7. Pursuant to General Condition #11 and the Department's request, the permittee will supply a copy of as-built surveys for dredge and placement area cross-sections to the Bureau with the statement of completion. At the same time, the permittee will supply pre-dredge survey data and drawings, acquired within six (6) months of dredging, and following the last major storm.

MONITORING REQUIRED:

8. Water Quality Monitoring (Turbidity)

a. At the dredge sites:

Frequency: Twice daily, at least four (4) hours apart, but NOT at slack tide. In the event of hopper overflow, one additional time approximately one (1) hour after discharge begins.

Location: **Compliance:** 150 meters downcurrent of the point of dredging, within the densest portion of any visible turbidity plume, at surface, mid-depth, and 1 foot above bottom.

Background: At least 300 meters upcurrent of the point of dredging, outside any visible turbidity plume and any influence of this project, at surface, mid-depth, and 1 foot above bottom.

b. At the disposal site (R-76 to R-79):

Frequency: Twice daily, at least four (4) hours apart, after disposal has been continual for at least one (1) hour.

Location: **Compliance:** 150 meters downcurrent of the discharge point, within the densest portion of any visible turbidity plume, at surface and mid-depth. If no plume is visible, samples shall be collected 150 meters downcurrent of the discharge point and 50 meters offshore.

Background: At least 300 meters upcurrent of the discharge point or at least 800 meters downcurrent of the compliance station, outside of any visible turbidity plume and any influence of this project at the same distance offshore as the compliance point.

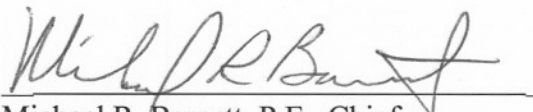
Weekly summaries of all turbidity monitoring data shall be submitted to the JCP Compliance Officer of the Bureau of Beaches and Coastal Systems and to the Southeast District Office within one week of collection, with documents containing the following information: (1) **"Permit Number 0216012-001-JC"**; (2) **"Palm Beach Harbor Maintenance Dredging Project"** (3) dates and times of sampling and analysis; (4) a statement describing the methods used in collection, handling, storage and analysis of the samples; (5) a map indicating the sampling locations, current direction, plume configuration and the location of the dredge and discharge point(s); and (6) a statement by the individual responsible for implementation of the sampling program concerning the authenticity, precision, limits of detection and accuracy of the data. Monitoring reports

shall also include the following information for each sample that is taken: a) time of day samples taken; b) depth of water body; c) depth of sample; d) antecedent weather conditions; e) tidal stage and direction of flow; f) wind direction and velocity; and g) DGPS position. Reports may be submitted electronically.

The compliance locations given above shall be considered the limits of the temporary mixing zone for turbidity allowed during construction. If monitoring reveals turbidity levels at the compliance sites are greater than 29 NTUs above the associated background turbidity levels, construction activities shall cease immediately and not resume until corrective measures have been taken and turbidity has returned to acceptable levels.

Executed in Tallahassee, Florida.

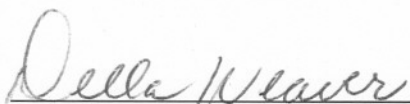
STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



Michael R. Barnett, P.E., Chief
Bureau of Beaches and Coastal Systems

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to Section 120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

 3/17/05
Deputy Clerk Date

Prepared by S. MacLeod.

12 pages attached.



Department of Environmental Protection

Jeb Bush
Governor

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Colleen M. Castille
Secretary

CONSOLIDATED MAJOR MODIFICATION TO JOINT COASTAL PERMIT AND SOVEREIGN SUBMERGED LANDS AUTHORIZATION

PERMITTEE/AUTHORIZED ENTITY: PERMIT INFORMATION:

U.S. Army Corps of Engineers
c/o Richard Bonner, P.E.
Jacksonville District
P.O. Box 4970
Jacksonville, FL 32232

Permit/Authorization Number: 0216012-007-JC

Issuance Date: September 21, 2006

Expiration Date of Construction Phase:
March 17, 2015

Project Name: Palm Beach Harbor Maintenance
Dredging (Beach Placement)

County: Palm Beach

This major modification to Permit No. 0216012-001-JC is issued under the authority of Chapter 161 and Part IV of Chapter 373, Florida Statutes (F.S.), and Title 62, Florida Administrative Code (F.A.C.). Pursuant to Operating Agreements executed between the Department of Environmental Protection (Department) and the water management districts, as referenced in Chapter 62-113, F.A.C., the Department is responsible for reviewing and taking final agency action on this activity. This major modification, hereafter referred to as Permit No. 0216012-007-JC, supersedes Permit No. 0216012-001-JC and its associated modifications (including Permit Modification No. 0216012-008-EM). Changes to the Activity Description and Specific Conditions for Permit No. 0173770-001-EI (as previously modified) are shown as striketroughs (deletions) or underlines (additions). Changes to the General Conditions are not specifically indicated, but reflect the General Conditions adopted under the Interagency Coordination Agreement (ICA) signed in February 2006.

ACTIVITY DESCRIPTION:

The project is to expand the settling basin and maintenance dredge the entire navigation-related complex at Palm Beach Harbor/Lake Worth Inlet to the following specifications:

Location	Depth + Overdredge (below MLW)	USACE Boundaries* (Approximate)
Settling Basin (Southern)	35 feet + 2 feet	Rge (000 to -825), Stn (32.0 to 37.5)
Settling Basin (Northern)	29 feet + 1 foot	Rge (-825 to -975), Stn (32.0 to 37.5)
Entrance Channel (Outer)	35 feet + 2 feet	Rge (000 to 400), Stn (25.0 to 30.0)
Entrance Channel (Main)	37 feet + 2 feet	Rge (000 to 400), Stn (30.0 to 56.0)

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Palm Beach Harbor Maintenance Dredging (Beach Placement)
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Inner Channel	33 feet + 2 feet	Rge (000 to 400), Stn (56.0 to 86.0)
Turning Basin (Main)	33 feet + 2 feet	Rge (-140000 to 1600), PI Stn (-1.4 to 17.2)
Turning Basin (Northern)	25 feet + 1 foot	Rge (-500 to 150080), PI Stn (10.1 to 19.6)

** Reference from ~~indicated on~~ USACE plans. Rge interval = one foot, Stn interval = 100 feet.*

Dredged material will be placed within the beach-nearshore disposal template, which includes both the dry beach and the nearshore area landward of the -17-foot mean low water (MLW) contour, and seaward of the MLW line, to The berm will have an elevation of approximately s at or below 0.0+8.7 feet (MLW), with a 1V:20H seaward slope. Placement of material will begin immediately south of the south jetty, and proceed in a southerly direction. If, during a single dredging event, the beach template immediately south of the Lake Worth Inlet becomes filled, beach-quality sand may be placed within the Mid-Town template, in accordance with Permit Modification No. 0164713-002-EM. Within the entrance channel (between USACE Stations 25.0 to 56.0), shoals of less than 5,000 cubic yards may be transferred to deeper parts of the channel to temporarily alleviate navigational hazards. An artificial reef will be constructed to offset the impact (i.e., burial) of the patch hardbottom reef (approximately 0.12 acre) between DEP reference monuments R-78 and R-79. Authorization to dredge is currently limited to maintenance only; a permit modification is necessary prior to expansion of the settling basin. ~~Placement of dredged material to within the described template is only authorized until October 31, 2006, unless the permit is subsequently modified.~~

ACTIVITY LOCATION:

Dredging activity is located at or adjacent Lake Worth Inlet, within Sections 34 and 35 Township 42 South, Range 43 East. The nearshore disposal template and the first beach fill template are located immediately south of the jetty, between DEP reference monuments R-76 and R-79, Sections 2 and 3, Township 43 South, Range 43 East. The Mid-Town beach fill template is located between R-90.4 and R-101.4. The Mid-Town Borrow Area lies within Sections 1 and 12, Township 43 South, Range 43 East. All activities are within Palm Beach County, Lake Worth Lagoon (Atlantic Intracoastal Waterway) or the Atlantic Ocean, Class III Waters, **not** Outstanding Florida Waters.

The Department acknowledges that maintenance dredging of the Palm Beach Harbor entrance channel, settling basin and turning basins falls within one of the federal powers listed in the Submerged Lands Act under 43 USC 1311(d) or 43 USC 1314, and, under those provisions, needs no authorization from the Board of Trustees to utilize sovereignty submerged lands. However, under the provisions of the Coastal Zone Management Act (16 USC 1451-1465), this activity requires Florida's concurrence with a determination of consistency with the sovereignty submerged lands provisions of Florida's approved Coastal Management Program prior to Federal approval of the proposed activity. The State has determined that the activity is consistent with the sovereignty submerged lands provisions of Florida's approved Coastal Management Program.

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A Letter of Consent to use the secondary beach disposal site at Mid-Town has already been granted under Permit Modification No. 0164713-002 EM. The permittee is responsible for obtaining all necessary permissions from the riparian owners immediately south of the inlet.

The mitigation reef construction and placement of dredged material seaward of the MHWL at the primary beach disposal location also requires a proprietary authorization, as the activities are located on sovereign submerged lands owned by the Board of Trustees of the Internal Improvement Trust Fund, pursuant to Article X, Section 11 of the Florida Constitution, and Sections 253.002 and 253.77, F.S. The activities are not exempt from the need to obtain a proprietary authorization. The Department has the responsibility to review and take final action on this request for proprietary authorization in accordance with Section 18-21.0051, F.A.C., and the Operating Agreements executed between the Department and the water management districts, as referenced in Chapter 62-113, F.A.C. In addition to the above, this proprietary authorization has been reviewed in accordance with Chapter 253, Chapter 18-21, Section 62-343.075, F.A.C., and the policies of the Board of Trustees.

As staff to the Board of Trustees, the Department has reviewed the activity described above, and has determined that the mitigation reef construction and placement of dredged material seaward of the MHWL at the primary beach disposal location qualify for a letter of consent to use sovereign, submerged lands, as long as the work performed is located within the boundaries as described herein and is consistent with the terms and conditions herein. Therefore, consent is hereby granted to the local sponsor, the Port of Palm Beach, pursuant to Chapter 253.77, F.S., to perform the dredged material disposal on the specified sovereign submerged lands. Consent is also granted to the Town of Palm Beach to construct the mitigation reef once the formal Mitigation Plan has been approved according to the Specific Conditions of this permit.

The Department will enter into a contractual agreement with the local government entity, the Town of Palm Beach, under which the Town will be responsible for conducting certain monitoring, mitigation, and beach maintenance activities for the protection of natural resources, nesting marine turtles, their hatchlings and their habitat. The agreement is enforceable against the Town and is independent of this permit.

The above named permittee is hereby authorized to construct the work shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof. **This permit and authorization to use sovereign submerged lands is subject to the limits, conditions, and locations of work shown in the attached drawings, and is also subject to the General Conditions and Specific Conditions, which are a binding part of this permit and authorization.** You are advised to read and understand these drawings and conditions prior to commencing the authorized activities, and to ensure the work is conducted in conformance with all the terms, conditions, and drawings. If you are utilizing a contractor, the contractor also should read and understand these drawings and conditions prior to commencing the authorized activities.

USACE STANDARD PRACTICES:

The USACE commits to incorporating the following details as part of their customary actions:

1. Plan drawings and surveys will show all biological resources and work spaces (e.g., anchoring area, pipeline corridors, staging areas, boat access corridors, etc.) to be used for this project.
2. As built surveys will clearly depict both the original design and constructed elevation.
3. The statement of completion will specify volume dredged and volume placed for each work area (e.g., Turing Basin, Channel, Existing Settling Basin, etc.)

GENERAL CONDITIONS:

1. All activities approved shall be implemented as set forth in the drawings incorporated by reference and in compliance with the conditions and requirements of this document. The Corps shall notify the Department in writing of any anticipated significant deviation from this authorization prior to implementation so that the Department can determine whether a modification is required. If the Department determines that a deviation is significant, then the Corps or the local sponsor, as appropriate, shall apply for and obtain the modification prior to its implementation.
2. If, for any reason, the Corps does not comply with any condition or limitation specified herein, the Corps shall immediately provide the Department with a written report containing the following information: a description of and cause of noncompliance; and the period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. Compliance with the provisions of this condition shall not preclude the Department from taking any enforcement action allowed under state law to the extent that federal sovereign immunity has been waived under 33 U.S.C. 1323 and 1344(t).
3. The Corps shall obtain any applicable licenses or permits which may be required by federal, state, local or special district laws and regulations. Nothing herein constitutes a waiver or approval of other Department permits or authorizations that may be required for other aspects of the total project. Projects shall not proceed until any other required permits or authorizations have been issued by the responsible agency.
4. Nothing herein conveys title to land or water, constitutes State recognition or acknowledgment of title, or constitutes authority for the use of sovereign land of Florida seaward of the mean high-water line, or, if established, the erosion control line, unless herein provided, and the necessary title, lease, easement, or other form of consent authorizing the proposed use has been obtained from the State.

5. Any delineation of the extent of a wetland or other surface water submitted as part of the application, including plans or other supporting documentation, shall not be considered specifically approved unless a specific condition of this authorization or a formal determination under section 373.421(2), F.S., provides otherwise.
6. Nothing herein conveys to the Corps or creates in the Corps any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the Corps or local sponsor, or convey any vested rights or any exclusive privileges.
7. This document or a copy thereof, complete with all conditions, attachments, modifications, and time extensions shall be kept at the work site on the authorized activity. The Corps shall require the contractor to review this document prior to commencement of the authorized activity.
8. The Corps specifically agrees to allow Department personnel with proper identification, at reasonable times and in compliance with Corps specified safety standards access to the premises where the authorized activity is located or conducted for the purpose of ascertaining compliance with the terms of this document and with the rules of the Department and to have access to and copy any records that must be kept; to inspect the facility, equipment, practices, or operations regulated or required; and to sample or monitor any substances or parameters at any location reasonably necessary to assure compliance. Reasonable time may depend on the nature of the concern being investigated.
9. At least forty-eight (48) hours prior to the commencement of authorized activity, the Corps shall submit to the Department a written notice of commencement of activities indicating the anticipated start date and the anticipated completion date.
10. If historic or archaeological artifacts are discovered at any time on the project site, the Corps shall immediately notify the State Historic Preservation Officer, and if a significant deviation is necessary, shall also notify the Department.
11. Within a reasonable time after completion of project construction or a periodic maintenance dredging event, the Corps shall submit to the Department a written statement of completion. This statement shall notify the Department that the work has been completed as authorized and shall include a description of the actual work completed. The Department shall be provided, if requested, a copy of any as-built drawings required of the contractor or survey performed by the Corps.

SPECIFIC CONDITIONS:

1. Pursuant to General Condition #11 and the Department's request, the permittee will supply a copy of as-built surveys for dredge and placement area cross-sections to the Department with the statement of completion. At the same time, the permittee will supply pre-dredge survey data and drawings, acquired within six (6) months of dredging and following the last major storm.

1. ~~The Department has issued this permit based on adherence by the USACE and its contractors to resource protection measures that maintain the intent of, and are substantially similar to, provisions contained in the draft plans and specifications reviewed and approved by the Department. Accordingly, the draft plans and specifications currently contain the following sections:~~

a. ~~Protection of Fish and Wildlife Resources~~

- i. ~~Endangered Species Protection~~
- ii. ~~Endangered Species Observers (Hopper Dredge Only)~~
- iii. ~~Manatee, Sea Turtle, and Whale Sighting Reports~~
- iv. ~~Disposition of Turtles or Turtle Parts~~
- v. ~~Report Submission~~
- vi. ~~Hopper Dredge Equipment~~
- vii. ~~Recording Charts for Hopper Dredge(s)~~
- viii. ~~Sea Turtle Risk Assessment (For Hopper Dredges Only)~~
- ix. ~~Sea Turtle Beach Nest Monitoring~~
- x. ~~Beach Placement Restrictions~~
- xi. ~~Hardground/Reef Protection~~

b. ~~Seagrass Protection Measures~~

~~If there is any significant change in any of these provisions, the USACE will notify the Department pursuant to General Condition #1. While the federal government is in some cases entitled to the privilege of sovereign immunity, the state reserves the right to proceed in any legal action against the USACE or its contractors that it deems appropriate.~~

2. All reports or notices relating to this permit shall be sent to the DEP, Bureau of Beaches and Coastal Systems, JCP Compliance Officer, 3900 Commonwealth Boulevard, Mail Station 300, Tallahassee, Florida 32399-3000 and the DEP Southeast District Office, 400 N. Congress Avenue, Suite 200, West Palm Beach, FL, 33401. When submitting any information to the Bureau, please include a transmittal cover letter clearly labeled with the following at the top of each page: "This information is submitted in accordance with Item No. [XX] of Permit No. 0216012-001-JC, Palm Beach Harbor Maintenance Dredging." Only the cover letter of reports need be directed to the DEP Southeast District Office.

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Palm Beach Harbor Maintenance Dredging (Beach Placement)
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3. At least 7 days prior to commencement of the initial dredging event authorized by this permit, and at least 14 days prior to each subsequent event (or as soon as possible for removal of shoals that are impacting navigation), the permittee shall conduct a pre-construction conference to review the specific conditions and monitoring requirements of this permit with permittee's contractors, the engineer of record, and Department staff representatives. The permittee shall provide written notification, at least 7 days in advance of the meeting for the initial dredging event, and at least 14 days in advance of the meeting for subsequent events (or as soon as possible for removal of shoals that are impacting navigation), to the following offices advising of the date, time, and location of the pre-construction conference:

DEP, Bureau of Beaches & Coastal Systems Attn: JCP Compliance Officer Mail Station 300 3900 Commonwealth Boulevard Tallahassee, Florida 32399-3000 Phone: (850) 488-77087-4474 Fax: (850) 414-772588-5257 JCPCompliance@dep.state.fl.us	DEP, Southeast District Office Submerged Lands & Environmental Resources Program 400 N. Congress Avenue, Suite 200 West Palm Beach, FL 33401 Phone: (813) 632-7600(561)-681-6600 Cece.McKiernan@dep.state.fl.us
FWC, Imperiled Species Management Section 620 South Meridian Street Tallahassee, Florida 32399-1600 Phone: (850) 922-4330 Fax: (850) 921-4369 fcmpmail@myfwc.com	Town of Palm Beach Attn: Coastal Projects Administrator 951 Old Okeechobee Rd West Palm Beach, FL 33401 Phone: (561) 838-5440 Fax: (561) 835-4691 STate@TownofPalmBeach.com

4. At least 14 days prior to construction for the initial dredging event, and at least 28 days prior to each subsequent dredging event (or as soon as possible for removal of shoals that are impacting navigation), the permittee shall submit the following for review by the Department one (1) hard copy and an electronic copy of detailed ***final construction plans and specifications*** for all authorized activities, including a vessels operations plan. The final plans shall be signed by a professional engineer registered in any state. Any significant changes made to these documents during construction, as necessitated by field conditions, will be dealt with pursuant to General Condition #1.
5. The Permittee shall adhere to the attached Sediment Quality Control/Quality Assurance Plan, approved by the Department on July 20, 2006, pursuant to Rule 62B-41.008(1)(k)4.b., F.A.C. This Plan is incorporated into the Specific Conditions of this permit by reference. The Sediment Quality Control/Quality Assurance Plan may be revised with written approval from the Department.

~~At least 48 hours prior to commencement of work authorized by this permit, the permittee shall provide written notification of the date of the commencement and proposed schedule of construction.~~

6. The permittee and the Department, within their respective authorities and funding, shall ensure that beach compatible dredged material is placed on Florida's beaches to the extent economically feasible, consistent with Florida's beach management plan adopted pursuant to Chapter 161, F.S. and other beneficial uses criteria as may be specified by the Department and applicable federal standards. To further the parties' goals for sediment management, prior to each dredging event the Corps shall provide the Department with existing geotechnical information characterizing the sediments to be dredged and alternative disposal options with projected costs to allow the Department to participate in funding alternative disposal options over the least costly method.
7. ~~Pursuant to General Condition #11 and the Department's request, the permittee will supply a copy of as-built surveys for dredge and placement area cross-sections to the Bureau with the statement of completion. At the same time, the permittee will supply pre-dredge survey data and drawings, acquired within six (6) months of dredging, and following the last major storm.~~

MONITORING REQUIRED:

78. Water Quality Monitoring (Turbidity)

- a. At the dredge sites:
 - Frequency: Twice daily, at least four (4) hours apart, and at least one (1) hour after the initiation of dredging. In the event of hopper overflow (dewatering), samples shall be collected approximately halfway through the dewatering process.
 - Location: Compliance: 150 meters downcurrent of the point of dredging or other construction-related discharge, within the densest portion of any visible turbidity plume, at surface, mid-depth, and 1 foot above bottom.
 - Background: At least 300 meters upcurrent of the point of dredging, outside any visible turbidity plume and any influence of this project, at surface, mid-depth, and 1 foot above bottom.
- b. At the beach disposal site (R-76 to R-79):
 - Frequency: Twice daily, at least four (4) hours apart, when plume is most visible from discharge activities
 - Location: Compliance (while Variance No. 0216012-004 EV is valid):

- 1) ~~Within the densest portion of any visible turbidity plume, along the perimeter of the fixed mixing zone, at surface and mid-depth.~~

~~or~~

- 2) ~~If a plume is not visible, the samples shall be collected directly offshore of DEP monument R-80, 50 meters seaward of the MHW line, and directly offshore of the discharge point, 150 meters seaward of the MHW line, at surface and mid-depth.~~

~~Compliance (following the expiration of Variance No. 0216012-004-EV): 150 meters downcurrent of the point where discharge enters surface waters, within the densest portion of any visible turbidity plume, at surface and mid-depth. If no plume is visible, samples shall be collected 150 meters downcurrent of the discharge point and 50 meters offshore, at surface and mid-depth.~~

Background: At least 300 meters upcurrent of the discharge point, 150 meters seaward of the MHW line, and outside of any visible turbidity plume. If placement is within 300 meters of the south jetty (i.e., less than 300 meters exist between the discharge point and the south jetty), the background sample may be obtained at least 800 meters downdrift of the (farthest) compliance station.

c. For disposal within the channel:

Frequency: Twice daily, at least four (4) hours apart, approximately 15 minutes after the commencement of disposal activities.

Location: Compliance: 150 meters downcurrent of the point of disposal, within the densest portion of any visible turbidity plume, at surface, mid-depth, and 1 foot above bottom.

Background: At least 300 meters upcurrent of the point of dredging, outside any visible turbidity plume and any influence of this project, at surface, mid-depth, and 1 foot above bottom.

Weekly summaries of all turbidity monitoring data shall be submitted to the JCP Compliance Officer of the Bureau of Beaches and Coastal Systems and to the Southeast District Office within one week of collection, with documents containing the following information: (1) **“Permit Number 0216012-007-JC001-JC”**; (2) **“Palm Beach Harbor Maintenance Dredging (Beach Placement) Project”** (3) dates and times of sampling and analysis; (4) a statement describing the methods used in collection, handling, storage and

analysis of the samples; (5) a map indicating the sampling locations, current direction, plume configuration and the location of the dredge and discharge point(s); and (6) a statement by the individual responsible for implementation of the sampling program concerning the authenticity, precision, limits of detection and accuracy of the data. Monitoring reports shall also include the following information for each sample that is taken: a) time of day samples taken; b) depth of water body; c) depth of sample; d) antecedent weather conditions; e) tidal stage and direction of flow; f) wind direction and velocity; and g) DGPS position. Reports may be submitted electronically.

The compliance locations given above shall be considered the limits of the temporary mixing zone for turbidity allowed during construction. If monitoring reveals turbidity levels at the compliance sites are greater than 29 NTUs above the associated background turbidity levels, construction activities shall cease immediately and not resume until corrective measures have been taken and turbidity has returned to acceptable levels.

- ~~9. The existing hardbottom resources between monument R-78 and R-79, shall not be buried by the direct placement or equilibration of the authorized nearshore disposal. Material shall be placed at least 50 feet from this hardbottom area, such that the equilibrium toe of fill does not encroach on the hardbottom (see attached figure).~~
8. Beach construction activities at the Mid-Town beach disposal site are subject to the terms and conditions of Permit No. **0164713-001-JC** and the associated modifications. The Permittee is not responsible for post-construction monitoring or mitigation at the Mid-Town location under this permit (No. 0216012-007-JC); however, the Sediment Quality Control/Quality Assurance Plan adopted under this permit shall still apply at Mid-Town.
9. **Sea Turtle Protection.** The Permittee shall adhere to the following sea turtle protection measures:
 - a. All fill material placed shall be sand that is similar to that already existing at the beach site in both coloration and grain size distribution and suitable for marine turtle nesting. All such fill material shall be free of construction debris, rocks, or other foreign matter, and shall not contain, on average, greater than ten (10) percent fines (i.e., silt and clay) (passing the #230 sieve) and shall not exceed 5 percent of gravel or cobbles retained on the 3/4 sieve, or in a percentage or size greater than found on the native beach, whichever is less. At the Mid-Town disposal location, fines shall not exceed five (5) percent by weight.
 - b. Beach nourishment or sand placement on the beach shall be started after October 31 and be completed before May 1. During the May 1 through October 31 period, no construction equipment or pipes shall be stored on the beach.
 - c. If the beach nourishment will be conducted during the period from March 1 through April 30, the following conditions apply:

- i. A daily marine turtle nest survey of the nesting beach in the vicinity of the project (including areas of beach access) shall be conducted starting March 1 and continue until October 31. Only those nests that may be affected by construction activities shall be relocated. Nests requiring relocation shall be moved no later than 9 a.m. the morning following deposition to a nearby self-release beach site in a secure setting where artificial lighting will not interfere with hatchling orientation. Nest relocations in association with construction activities shall cease when construction activities no longer threaten nests.
- ii. Nests deposited within areas where construction activities have ceased or will not occur for 65 days shall be marked and left in place unless other factors threaten the success of the nest. Such nests will be marked and the actual location of the clutch determined. A circle with a radius of ten (10) feet, centered at the clutch, shall be marked by stake and survey tape or string. No construction activities shall enter this circle and no adjacent construction shall be allowed which might directly or indirectly disturb the area within the staked circle.
- iii. No construction activity may commence on any previously undisturbed section of adjacent beach more than 50 feet from the active work site until completion of the marine turtle survey each day unless provisions have been made for nighttime monitoring. This includes the performance of a survey immediately prior to movement of equipment onto a previously darkened section of beach, and the establishment of proper lighting prior to work in that section.
- iv. It is the responsibility of the permittee to ensure that the project area and access sites are surveyed for marine turtle nesting activity. All nesting surveys, nest relocations screening or caging activities etc. shall be conducted only by persons with prior experience and training in these activities and who is duly authorized to conduct such activities through a valid permit issued by the Fish and Wildlife Conservation Commission (FWC), pursuant to Florida Administrative Code 68E-1.
- d. If the beach nourishment project will be conducted during the period from November 1 through November 30, daily early morning sea turtle nesting surveys must be conducted 65 days prior to project initiation and continue through September 30, and eggs must be relocated per the preceding requirements.
- e. From March 1 through April 30 and November 1 through November 30, all project lighting shall be limited to the immediate area of active construction only and shall be the minimal lighting necessary to comply with U.S. Coast Guard

and/or OSHA requirements. Stationary lighting on the beach and all lighting on the dredge shall be minimized through reduction, shielding, lowering, and appropriate placement of lights to minimize illumination of the nesting beach and water (Figure 1).

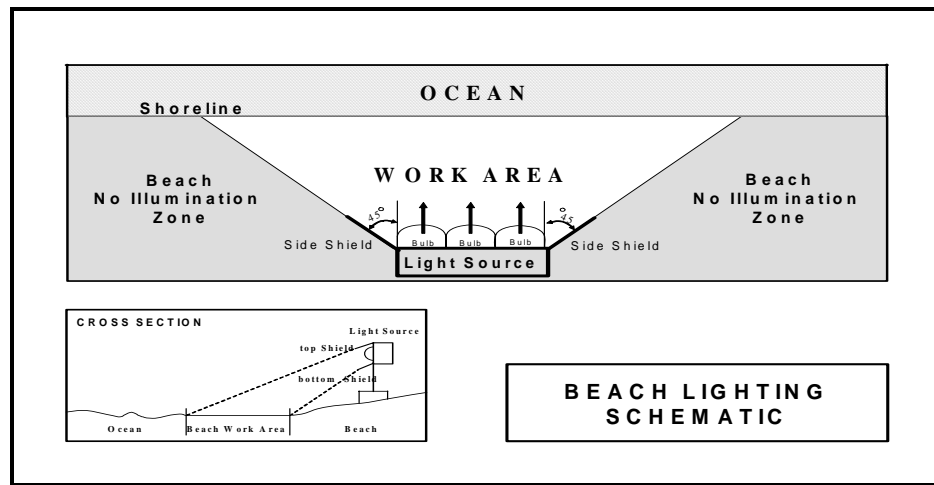


Figure 1.

- f. From March 1 through May 1 and November 1 through November 30, staging areas for construction equipment shall be located off the beach to the maximum extent possible. Nighttime storage of construction equipment not in use shall be off the beach to minimize disturbance to sea turtle nesting and hatching activities. All construction pipes that are placed on the beach shall be located as far landward as possible without compromising the integrity of the existing or reconstructed dune system.
- g. If only the nearshore template can be used during a given dredging event (i.e., no placement of material upon the dry beach), any placement of sand in the subtidal zone shall be accomplished such that no exposed sandy berm is created. Creation of a wide, shallow intertidal zone at or immediately adjacent to the berm shall also be avoided. Sand should be placed at or below mean low water.
- h. Immediately after completion of each fill placement event, the beach shall be tilled to a depth of 36 inches. If the project is completed during the marine turtle nesting season, tilling shall not occur in areas where nests have been left in place or relocated unless authorized by the U.S. Fish and Wildlife Service in an Incidental Take Statement. A report on the results of compaction monitoring shall be submitted to the FWC prior to any tilling actions being taken. This condition shall be evaluated annually and may be modified if necessary to address sand compaction problems identified during the previous year.

- i. Visual surveys for escarpments along the beach fill area and landward of any in-water placement shall be made immediately after completion of the beach nourishment or sand placement. All scarps shall be leveled or the beach profile shall be reconfigured to minimize scarp formation.
- j. Reports on all nesting activity shall be provided for the initial nesting season on both the nourished beach and an adjacent control area of equal length. Reports submitted shall include daily report sheets noting all activity, nesting success rates, hatching success of all relocated nests, hatching success of a representative sampling of nests left in place (if any), dates of construction and names of all personnel involved in nest surveys and relocation activities. Data should be reported separately for the nourished areas and for an equal length of adjacent beach that is not nourished in accordance with the table below. Summaries of nesting activity shall be submitted in electronic format (Excel spreadsheets). All reports should be submitted by January 15 of the following year.

Characteristic	Parameter	Measurement	Variable
Nesting Success	False crawls – number	Visual assessment of all false crawls	Number and location (i.e., fill or control or not filled) of false crawls
	False crawl – type	Categorization of the stage at which nesting was abandoned	Number in each of the following categories: emergence-no digging, preliminary body pit, abandoned egg chamber
	False crawls & nests – location	The location of every false crawl and false nest shall be marked on a aerial photograph and referenced to the R-monument	Position of false crawl and nest and mapped locations
	Nests	Location of all marine turtle nests shall be marked on an aerial photograph, and approximate distance to the tide or wrack line estimated	Number and location, (i.e., fill or control or not filled) of nests, distance to wrack line (recommended). Any abnormal cavity morphologies should be reported.
		Lost Nests	The number of marked nests lost to inundation, erosion or the number of inundated nests or the number with lost markers that could not be relocated
Reproductive Success	Emergence & hatching success	Standard survey protocol	Numbers of the following: unhatched eggs, depredated eggs, live pipped eggs, dead pipped eggs, live hatchlings in nest, dead hatchlings in nest, hatchlings emerged as well as the number of inundation events. Depth from surface to top and bottom of nest cavity should also be reported.

- k. The applicant shall arrange a meeting between representatives of the contractor, the Department, the FWC, and the permitted person responsible for egg relocation at least 30 days prior to the commencement of work on this project. At least 10 days advance notice shall be provided prior to conducting this meeting. This will provide an opportunity for explanation and/or clarification of the sea turtle protection measures.
 - l. In the event a sea turtle nest is excavated during construction activities, all work shall cease in that area immediately and the permitted person responsible for egg relocation for the project should be notified so the eggs can be moved to a suitable relocation site.
 - m. In the event a hopper dredge is utilized for sand excavation, all conditions in the NMFS Biological Opinion for hopper dredging along the SE U.S. Atlantic Coast (dated August 25, 1995) must be followed, and the FWC shall be sent copies of the reports specified in Condition 6 of the Biological Opinion.
 - n. Upon locating a dead, injured, or sick endangered or threatened sea turtle specimen, initial notification must be made to the FWC at 1-888-404-FWCC. Care should be taken in handling sick or injured specimens to ensure effective treatment and care and in handling dead specimens to preserve biological materials in the best possible state for later analysis of cause of death. In conjunction with the care of sick or injured endangered or threatened species or preservation of biological materials from a dead animal, the finder has the responsibility to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.
 - o. No bed leveling shall be performed.
10. **Shorebird Protection.** The Permittee shall adhere to the following shorebird protection measures
- a. Shorebird surveys shall be conducted by trained, dedicated individuals using accepted, appropriate ecological survey procedures (for example, see “*Breeding Season Population Census Techniques for Seabirds and Colonial Waterbirds Throughout North America*” at URL: <http://www.mp2-pwrc.usgs.gov/cwb/manual/>). The shorebird nesting season generally is April 1 to September 1, but some nesting may occur through September.
 - i. Nesting season surveys shall begin on April 1 or 45 days prior to construction commencement, whichever is later, and be conducted daily throughout the construction period.

- ii. Post-construction surveys shall be required if shorebird nesting is documented on site. These surveys shall be continued by the Town of Palm Beach for the year of construction if fill material is placed in the nearshore zone and for one additional year post-construction if material is placed on the beach. Post-construction surveys shall be conducted on a weekly basis through the nesting and hatching season to document if nesting occurred on site and the fate of eggs, nestlings, or fledglings in the project area.
 - iii. Each shorebird species observed, a rough estimate of numbers of each species, the location of the birds, and their activity (e.g., foraging, resting, nesting, courtship behavior) should be logged and reported to the FWC Regional Wildlife Diversity Conservation Biologist monthly.
- b. Within the project area, the permittee shall establish a 300 ft-wide buffer zone around any location where shorebirds have been engaged in courtship or nesting behavior, or around areas where piping plovers occur or winter migrants congregate in significant numbers. Any and all construction activities, including movement of vehicles, should be prohibited in the buffer zone.
 - i. The width of the buffer zone shall be increased if birds appear agitated or disturbed by construction or other activities in adjacent areas.
 - ii. Site-specific buffers may be implemented upon approval by FWC as needed.
 - iii. Designated buffer zones must be posted with clearly marked signs around the perimeter. These markings shall be maintained until nesting is completed or terminated, the chicks fledge, or piping plovers or winter migrants depart.
 - iv. No construction activities or stockpiling of equipment shall be allowed within the buffer area.
 - v. FWC-approved travel corridors should be designated and marked outside the buffer areas. Heavy equipment, other vehicles, or pedestrians may transit past nesting areas in these corridors. However, other activities such as stopping or turning shall be prohibited within the designated travel corridors adjacent to the nesting site.
 - vi. Where such a travel corridor must be established within the project area it should avoid critical areas for shorebirds (known nesting sites, wintering grounds, FWC-designated Critical Wildlife Areas, and USFWS-

designated critical piping plover habitat) as much as possible, and be marked with signs clearly delineating the travel corridor from the shorebird buffer areas described above.

- vii. To the degree possible, the permittee should maintain some activity within these corridors on a daily basis, without directly disturbing any shorebirds documented on site or interfering with sea turtle nesting, especially when those corridors are established prior to commencement of construction. Passive methods to modify nesting site suitability must be approved by the FWC Wildlife Diversity Conservation Biologist for that region.
- c. If shorebird nesting occurs within the project area, a bulletin board will be placed and maintained in the construction area with the location map of the construction site showing the bird nesting areas and a warning, clearly visible, stating that “BIRD NESTING AREAS ARE PROTECTED BY THE FLORIDA THREATENED AND ENDANGERED SPECIES ACT AND THE FEDERAL MIGRATORY BIRD ACT”.
- d. Beach Contours. All tilling and scarp removal should be accomplished outside the shorebird nesting season. If necessary, contractors should contact the FWC Regional Wildlife Diversity Conservation Biologist at (561) 625-5129 to obtain data on known shorebird nesting areas. It is the responsibility of the contractors to avoid tilling or scarp removal in areas where nesting birds are present.

 - i. A relatively even surface, with no deep ruts or furrows, shall be created during tilling. To do this, chain-linked fencing or other material shall be dragged over those areas as necessary after tilling.
 - ii. The slope between the mean high water line and the mean low water line must be maintained in such a manner as to approximate natural slopes.

1140. Manatee Protection. The permittee shall comply with the following manatee protection construction conditions:

- a. The permittee shall instruct all personnel associated with the project of the potential presence of manatees and the need to avoid collisions with manatees. All construction personnel are responsible for observing water-related activities for the presence of manatee(s).
- b. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972, The Endangered Species Act of 1973, and the Florida Manatee Sanctuary Act.

- c. Dredging operations shall be conducted in such a manner and suspended as necessary to preclude impacting and/or avoiding collisions with manatees. All vessels should proceed in a cautionary manner that enables an on-board watch to look for manatees. The observer(s) shall contact the captain of the vessel in order to reduce the speed or alter the course, as necessary, should any manatees be observed. For the smaller boats associated with this project, the vessel operator can fulfill this requirement.
- d. Shallow draft vessels, preferably of the light-displacement type, shall be used whenever practicable for transporting personnel to and from the dredge.
- e. Siltation barriers shall be made of material in which manatees cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entrapment. Barriers must not block manatee entry to or exit from essential habitat.
- f. Inner Channel, Turning Basin, Extended Basin, Entrance Channel and Settling Basin construction/dredging shall be allowed year round, with the use of manatee observer(s) during the duration of the project that coincided with the aggregation of manatees at the power plant (November 15 through March 31). During this time vessel movement at night within the Inner Channel, Turning Basin, and Extended Basin will be minimized to the greatest extent practicable, since the possibility of spotting animals is negligible. All vessels shall travel at speeds no greater than idle speed while inshore.
- g. All vessels associated with the construction project shall operate at "no wake/idle" speeds at all times while in the construction area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
- f. Observer(s) must be placed aboard the dredging equipment to maintain a watch for manatees during dredging operations and during the dredge transit to and from the disposal site. At least one manatee observer should be posted to observe the presence of animals for every large vessel/barge utilized. At least one person shall be designated as a manatee observer when in-water work is being performed. That person shall have experience in manatee observation. The manatee observer must be on site during all in-water construction activities, and shall advise personnel to cease operations upon sighting a manatee within 50 feet of any in-water construction activity. Movement of a work barge, other associated vessels, or any in-water work shall not be performed after sunset, when the possibility of spotting manatees is negligible.
- g. If manatee(s) are seen within 100 yards of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented

to ensure protection of the manatee. These precautions shall include the operation of all moving equipment no closer than 50 feet of a manatee. Operation of any equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment. Activities will not resume until the manatee(s) has departed the project area of its own volition.

- h. Any collision with and/or injury to a manatee shall be reported immediately to the FWC Hotline at 1-888-404-FWCC. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Vero Beach (1-~~772-561~~-562-3909).
 - i. Temporary signs concerning manatees shall be posted prior to and during all construction/dredging activities. All signs are to be removed by the permittee upon completion of the project. A sign measuring at least 3 ft. by 4 ft. which reads *Caution: Manatee Area* will be posted in a location prominently visible to water related construction crews. A second sign should be posted if vessels are associated with the construction, and should be placed visible to the vessel operator. The second sign should be at least 8 1/2" by 11" which reads *Caution: Manatee Habitat. Idle speed is required if operating a vessel in the construction area. All equipment must be shutdown if a manatee comes within 50 feet of operation. Any collision with and/or injury to a manatee shall be reported immediately to the FWC Hotline at 1-888-404-FWCC. The U.S. Fish and Wildlife Service should also be contacted in Vero Beach (1-~~772-561~~-562-3909).*
 - j. If mechanical dredges (e.g., backhoe or clamshell) are used, NO nighttime dredging shall occur. No mechanical dredges shall be used between November 15 and March 31.
 - k. Mechanical dredging is authorized for one shoal removal event in the fall of 2006. For subsequent use of mechanical dredges, the permittee must acquire written approval from the Department, in consultation with FWC.
12. **Seagrass Protection.** If a hopper dredge is used, no overflow from the dredge shall occur within 300 meters of seagrass beds. Also, no overflow, spillage or leakage shall occur while material is being transported from the dredging area to the disposal area. Dredges shall be anchored only within the bottom of the channel, settling basin or turning basin, or other approved anchorage areas. Pipe and other dredging related equipment shall not be stored/stockpiled on or over seagrass beds or hardbottoms, nor shall such equipment be stored/stockpiled in areas where it may drift into, onto, or over such natural resources. The contractor shall take corrective measures to restore any habitat damaged as a result of project activities.
13. **Placement of dredged material within the beach and nearshore template immediately south of Lake Worth Inlet (R-76 to R-79) shall not commence until the**

Local Government Agreement is executed. In the event that the Town of Palm Beach does not conduct protection and monitoring requirements detailed in their written agreement with the Department, the Corps is still responsible for those protection measures specified by the applicable U. S. Fish and Wildlife Service Biological Opinion and the plans and specifications for this project.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



Michael R. Barnett, P.E., Chief
Bureau of Beaches and Coastal Systems

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to Section 120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

 9/21/06
Deputy Clerk Date

Prepared by S. MacLeod.

23 pages attached.

Permit Drawings (8 pages)
Sediment Quality Control/Quality Assurance Plan (7 Pages)
DRAFT Local Government Agreement (8 Pages)